

PHILIP MORRIS USA
RESEARCH AND DEVELOPMENT DEPARTMENT

SWITZERLAND TEST #159

MR4-06RS
ML4-06RS
MR6-06RS
MR8-06RS
PM8-06RS

DISTRIBUTION

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SWITZERLAND TEST #169

The following cigarette brands from Switzerland (Neuchatel) were received for testing on July 16, 1976. These cigarettes were of May, 1976 production.

Marlboro Long Size 20's (Box) - Switzerland
Marlboro Lights Long Size 20's (Box) - Switzerland
Marlboro King Size 20's (Soft Pack) - Switzerland
Marlboro 100 20's (Soft Pack) - Switzerland
Philip Morris Multifilter 100 20's (Soft Pack) -
Switzerland

The Marlboro long size cigarettes were not different from the previous average in any of the characteristics tested.

The Marlboro Lights long size cigarettes were not different from the previous average in any of the characteristics tested.

The Marlboro king size cigarettes were not different from the previous average in any of the characteristics tested.

The Marlboro 100 cigarettes were different from the previous average only in dilution.

The Philip Morris Multifilter 100 cigarettes were different from the previous average in tar, TPM and nicotine.

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	Marlboro Long Size 20's (Box)			Marlboro Lights Long Size 20's (Box)			Marlboro King Size 20's (Soft Pack)		
	Current	Prev. Avg.	U.S. ²	Current	Prev. Avg.	U.S. ²	Current	Prev. Avg.	U.S. ²
<u>Smoke</u>									
Butt length, mm	25	25	26	27	27	28	27	27	28
FTC Tar, mg/cigt.	17.4	17.6	17.6	11.3	11.6	11.9	16.9	17.7	17.9
TPM, mg/cigt.	21.3	22.4	21.9	13.9	14.0	22.2	20.8	22.0	22.2
Nicotine, mg/cigt.	1.04	1.13	1.05	0.86	0.87	1.07	1.08	1.14	1.07
Water, mg/cigt.	2.9	3.7	3.2	1.7	1.5	3.2	2.8	3.2	3.2
Puffs/cigt.	8.0	8.3	8.2	9.0	9.2	8.7	8.4	8.7	8.7
Filtration Eff., %	44	44	47	52	53	48	47	47	48
<u>Cigarette</u>									
Total RFD, in. of H ₂ O	4.1	4.1	4.6	4.7	4.8	4.8	4.3	4.3	4.8
mm of H ₂ O	104	104	117	119	122	122	109	109	122
Static Burn, Time, min.	7.7	7.7	7.7	7.6	7.6	7.7	7.5	7.5	7.7
Length, mm	79.5	79.3	79.6	79.6	79.6	84.5	84.4	84.5	84.5
Circumference, mm	25.1	25.1	24.9	25.1	25.1	25.1	25.0	25.1	25.0
Diameter, mm	8.0	8.0	7.9	8.0	8.0	8.0	8.0	8.0	8.0
<u>Paper</u>									
Porosity, sec.	11	12	21	10	11	20	12	13	20
<u>Filter</u>									
RFD, in. of H ₂ O	2.8	2.6	2.8	3.6	3.6	2.9	2.9	2.7	2.9
mm of H ₂ O	71	66	71	91	91	74	69	69	74
Length, mm	17.9	18.0	19.0	19.9	20.0	19.9	20.0	20.0	21.0
Weight, g	0.13	0.13	0.14	0.15	0.15	0.14	0.14	0.14	0.15
Tipping paper length, mm	22	22	23	24	24	24	24	24	25
Dilution, %	-	-	-	24	22	-	-	-	-
<u>Filler</u>									
Total alkaloids, %	1.52	1.55	1.49	1.52	1.52	1.51	1.51	1.56	1.49
Total reducing sugars, %	6.9	7.3	6.6	7.4	8.3	6.5	7.4 ³	7.4 ³	6.9
Wt. of tob., 1,000 cigts., g	789	791	730	831	834	825	829	829	770
1,000 cigts., lbs.	1.7374	1.7429	1.6076	1.8298	1.8369	1.8166	1.8254	1.8254	1.6956
Rod Density, g/cc	0.256	0.259	0.245	0.278	0.278	0.257	0.256	0.256	0.246
C.V., cc/10 g	32	30	35	32	29	30	30	30	36
C.V., cc/10 g (Corrected to 121 O.V.)	38	37	39	38	36	38	37	37	39
Oven Volatiles, %	14.0	14.4	13.7	14.1	14.7	14.4	14.2	14.2	13.4

¹Equilibrated at 75°F and 60% R.H. for 48 hrs.²Data from C.I. No. 8-76.³Results of Test #164, dated March 9, 1976, where a change was noted.

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	Marlboro 100 20's (Soft Pack)			Philip Morris Multifilter 100 20's (Soft Pack)	
	Current	Prev. Avg.	U.S. ²	Current	Prev. Avg.
<u>Smoke</u>					
Butt length, mm	33	33	34	33	33
tar, mg/cigt.	17.1	17.2	17.2	15.6	14.2
TPM, mg/cigt.	20.5	20.5	20.6	18.2	16.6
Nicotine, mg/cigt.	1.18	1.24	1.08	1.00	0.88
Water, mg/cigt.	2.2	2.1	2.3	1.6	1.5
Puffs/cigt.	9.6	10.2	9.2	10.0	9.6
Filtration eff., %	48	46	48	53	49
<u>Cigarette</u>					
Total RDB, in. of H ₂ O	4.2	4.1	4.9	5.6	5.4
mm of H ₂ O	107	104	125	142	137
Static Burn. Time, min.	7.2	6.8	6.8	7.4	6.8
Length, mm	98.9	99.2	99.4	99.1	99.1
Circumference, mm	24.6	24.6	24.8	24.6	24.7
Diameter, mm	7.8	7.8	7.9	7.8	7.9
<u>Paper</u>					
Porosity, sec.	12	12	13	29	31
<u>Filter</u>					
RDB, in. of H ₂ O	2.7	2.6	2.9	3.1	3.0
mm of H ₂ O	69	66	74	79	76
Inner, in. of H ₂ O	-	-	-	1.6	1.5
mm of H ₂ O	-	-	-	41	41
Outer, in. of H ₂ O	-	-	-	1.5	1.5
mm of H ₂ O	-	-	-	38	41
Length, mm	24.9	25.0	26.9	25.2	25.2
Inner	-	-	-	12.7	12.7
Outer	-	-	-	-	12.5
Weight, g	0.18	0.18	0.17	0.25	0.25
Inner	-	-	-	0.17	0.17
Outer	-	-	-	0.08	0.08
Carbon, mg/plug	-	-	-	75	77
Tipping paper length, mm	30	30	31	30	30
Dilution, %	9	18	None	-	-
<u>Filler</u>					
Total alkalooids, %	1.52	1.50	1.52	1.20	1.14
Total reducing sugars, %	7.1	7.5	6.7	8.7	9.8
Wt. of tob., 1,000 cigts., g	923	931	850	940	938
1,000 cigts., lbs.	2.0322	2.0504	1.8716	2.0696	2.0647
Rod Density, g/cc	0.259	0.261	0.242	0.264	0.261
C.V., cc/10 g	31	31	36	37	37
C.V., cc/10 g (Corrected to 12% O.V.)	38	37	39	39	40
Oven Volatiles, %	14.4	13.9	13.7	12.7	13.1

¹Equilibrated at 75°F and 60% R.H. for 48 hrs.

²Data from C.I. No. 8-76.

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